

Date: Thursday, 09/10/2008 10:21:41 AM  
 User: Julie Lecocq

# Process Sheet

**Customer** : CU-DAR001 Dart Helicopters Services  
**Job Number** : 42523A  
**Estimate Number** : 12898  
**P.O. Number** :  
**This Issue** : 09/10/2008 **S.O. No.** :  
**Prsht Rev.** : NC  
**First Issue** : / / **Type** : SKIDTUBES  
**Previous Run** : 40335A  
**Written By** :  
**Checked & Approved By** : JUL 08.10.09  
**Comment** : Est Rev:A 07.06.11 New Issue EC  
 Est Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

**Drawing Name** : BK117 SKIDTUBE ASSEMBLY  
**Part Number** : D117762041  
**Drawing Number** : D3582 REVA  
**Project Number** : N/A  
**Drawing Revision** : A  
**Material** :  
**Due Date** : 31/10/2008 **Qty:** 1 **Um:** Each

## Additional Product

Job Number:



| Seq. #:   | Machine Or Operation: | Description :               |
|---|-----------------------|-----------------------------|
| 1.0   | DC                    | DOCUMENT CONTROL            |
|   |                       |                             |
| <b>Comment:</b> DOCUMENT CONTROL<br>Photocopy bluefile & type labels per PPP D117-762-041 CHG001 N/A <u>JA</u>  |                       |                             |
| 2.0   | D2962150              | 3.540 Outer Tube, Extrud    |
|   |                       |                             |
| <b>Comment:</b> Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)<br>Pick:<br>Qty Part Number Description Batch<br>1 D2962-150 Extrusion <u>28672</u> <u>25 08-10-16</u>                 |                       |                             |
| 3.0   | SKIDTUBES 1           | SKIDTUBESS RESOURCE 1       |
|   |                       |                             |
| <b>Comment:</b> LANDING GEAR RESOURCE 1<br>1-Determine square end of tube and deburr<br>2-Drill #30 pilot holes using DT8678. Do not open holes.<br>3- Deburr holes. <u>25 08-10-16</u> |                       |                             |
| 4.0   | BENDING               | BENDING MACHINE - SKIDTUBES |
|   |                       |                             |
| <b>Comment:</b> BENDING MACHINE<br>Bend tube as per program on CNC Bender and Dwg D3582. Use 5/16" locator pin on buggy "A". <u>25 08-10-16</u>   |                       |                             |

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 42523A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

- 1-Cut Fwd end of the tube using DT8185 *ET 08-10-16*
- 2-Cut Aft end at VC using DT8185
- 3-Deburr ends
- 4-Drill Aft Cap holes using DT8678 \*\*\*DO NOT OPEN AFT CAP HOLE\*\*\*
- 5-Locate DT 8973 & Drill Ground wire hole on top of Tube.
- 6-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.
- 7-Drill pilot holes for wearplates using DT8974
- 8-Open wearplate holes and ground wire holes to Ø19/64" (0.297") as per Dwg D3582.
- 9-Open Aft Cap holes using .209" drill.
- 10-Deburr holes.

*ET*  
*08-10-16*

6.0

D2964

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch: *B14101* *BE 08-12-16*

7.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Weld fwd cap D2964 per dwg D3582 and QSI 004

A/R AL ROD

Batch: *B14101* *BE 08-12-16*

*m109560/m109213*

2-Grind flush

*ET 08-12-16*

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 42523A

Part Number: D117762041

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

8.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

S 08/12/16 (H)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/12/16 (H)

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

ARM 9-1-21

(1)

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DP

9-1-22

12.0

D2971

Cross Bolt Spacer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cross Bolt Spacer  
batch B44445

pmc 09-01-23

13.0

D2973

Cross Bolt Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Cross Bolt Spacer  
Batch: B14636

pmc 09-01-23

14.0

D36621

Crossbolt Spacer



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

SPACER  
batch B39585

pmc 09-01-23

15.0

D36623

Crossbolt Spacer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

SPACER  
batch B44456

SE 09/02/04

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 42523A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

D35841

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)  
WEB B 45064

pm 09-01-22

17.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open X-Bolt holes to .750"(4Places) as per Dwg D3582, section B-B

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex Batch: M09083  
Exp Date: 09-07-11

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD Batch: M110225 OF 09/01/28

6-Grind welds flush

pm 09-02-03

pm 09-01-22

Tools: E

18.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

8 09/02/04 (10)

19.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 09/02/04 (10)

20.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M 100996

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

14:20  
320°  
14:50

BK 09-02-09

FX 09/02/09 (11)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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Job Number: 42523A

Part Number: D117762041

Job Number:



Seq. #: Machine Or Operation: Description :

21.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-02-10 (XU)

22.0 ALS41032130

Insert



Comment: Qty.: 36.0000 Each(s)/Unit Total : 36.0000 Each(s)

Insert

Batch: m108606

FL

23.0 ALS4428165

Inserts



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Inserts

batch m 6989

\*\*\*same as ALS7-428-165 QSI 0017 \*\*\*

FL 09/02/10 (1)

24.0 HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Wearplate & Ground Wire inserts as per Dwg D3582.

FL 09/02/10 (1)

25.0 D2965

Cap, 105 Skidtube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch: 1545616

FL

26.0 D35083

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARPLATE

Batch: ~~D35083~~ 692250

FL

27.0 D35089

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARPLATE

Batch: 640359

FL 09/02/10 (1)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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## Process Sheet

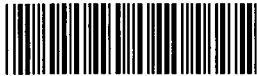
Customer: ÇU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 42523A

Part Number: D117762041

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

|      |         |           |
|------|---------|-----------|
| 28.0 | D350811 | Wearplate |
|------|---------|-----------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Batch: B40398  
WEARPLATE

FL

|      |         |           |
|------|---------|-----------|
| 29.0 | D350813 | Wearplate |
|------|---------|-----------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
WEARPLATE  
Batch: B38528

FL

|      |        |        |
|------|--------|--------|
| 30.0 | D35583 | Gasket |
|------|--------|--------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
GASKET  
Batch: B42253

FL

|      |        |        |
|------|--------|--------|
| 31.0 | D35589 | Gasket |
|------|--------|--------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
GASKET  
Batch: B40361

FL

|      |         |        |
|------|---------|--------|
| 32.0 | D355811 | Gasket |
|------|---------|--------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
GASKET  
Batch: B40399

FL

|      |         |        |
|------|---------|--------|
| 33.0 | D355813 | Gasket |
|------|---------|--------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
GASKET  
Batch: B42255

FL

|      |        |      |
|------|--------|------|
| 34.0 | AN3C4A | BOLT |
|------|--------|------|



Comment: Qty.: 28.0000 Each(s)/Unit Total : 28.0000 Each(s)  
BOLT  
Batch: m110468

FL 09/02/10 (1)

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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Job Number: 42523A

Part Number: D117762041

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

|      |        |      |
|------|--------|------|
| 35.0 | AN3C5A | Bolt |
|------|--------|------|



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Bolt  
Batch: m110468

FL

|      |       |      |
|------|-------|------|
| 36.0 | AN44A | Bolt |
|------|-------|------|



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Bolt  
batch m106918

FL

|      |           |        |
|------|-----------|--------|
| 37.0 | AN960C10L | washer |
|------|-----------|--------|



Comment: Qty.: 28.0000 Each(s)/Unit Total : 28.0000 Each(s)  
washer  
Batch: m110023

FL

|      |            |        |
|------|------------|--------|
| 38.0 | AN960JD10L | Washer |
|------|------------|--------|



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Washer  
batch m109632

FL

|      |             |        |
|------|-------------|--------|
| 39.0 | AN960JD416L | Washer |
|------|-------------|--------|



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Washer  
batch m108583

FL

|      |          |               |
|------|----------|---------------|
| 40.0 | D3492049 | Plug Assembly |
|------|----------|---------------|



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
PLUG ASSEMBLY  
batch B340356

FL

|      |          |               |
|------|----------|---------------|
| 41.0 | D3492051 | Plug Assembly |
|------|----------|---------------|



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
PLUG ASSEMBLY  
batch B34723

FL 09/02/10

①

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 42523A

Part Number: D117762041

Job Number:



Seq. #: Machine Or Operation: Description :

42.0 D3492053 Plug Assembly



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)  
PLUG ASSEMBLY  
batch 1544063

FL

43.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Inspect for Foreign objects

2-Install Aft cap as per Dwg D3582, Detail "C"

A/R 241 Sika Flex Batch: m109783  
Exp Date: 09/11

3-Install Wearplates as per Dwg D3582,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582

\*\*\*\*\*Do not install bolts where indicated on Dwg(Note #6)\*\*\*\*\*

A/R 241 Sika Flex Batch: m109783  
Exp Date: 09/11

FL  
09/02/10  
①

4- Wing Walk as per Dwg D3043 and QSI 005 4.4 M110454 9/1 09-02-11 FL

44.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/02/11 FL

45.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D117-762-041

Location: \_\_\_\_\_  
PPP Rev: PP1 4203

09/02/12 FL

46.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/02/18 FL

Job Completion



MF  
09-02-17

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries





|                               |  |              |             |
|-------------------------------|--|--------------|-------------|
| DART AEROSPACE LTD            |  | Work Order:  |             |
| Description: BK 117 Skid tube |  | Part Number: | D3582-011   |
| Inspection Dwg: D3582 Rev: A  |  |              | Page 1 of 1 |

## FIRST ARTICLE INSPECTION CHECKLIST

**x**

## Prototype

[illegible]

|  |   |                     |
|--|---|---------------------|
| Measured by:  | Audited by:  | Prototype Approval: |
| Date: 8/11/04  | Date: 8/11/04   | Date:               |

| Rev | Date | Change    | Revised by | Approved |
|-----|------|-----------|------------|----------|
| A   |      | New Issue | KJ/JLM     |          |

# PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

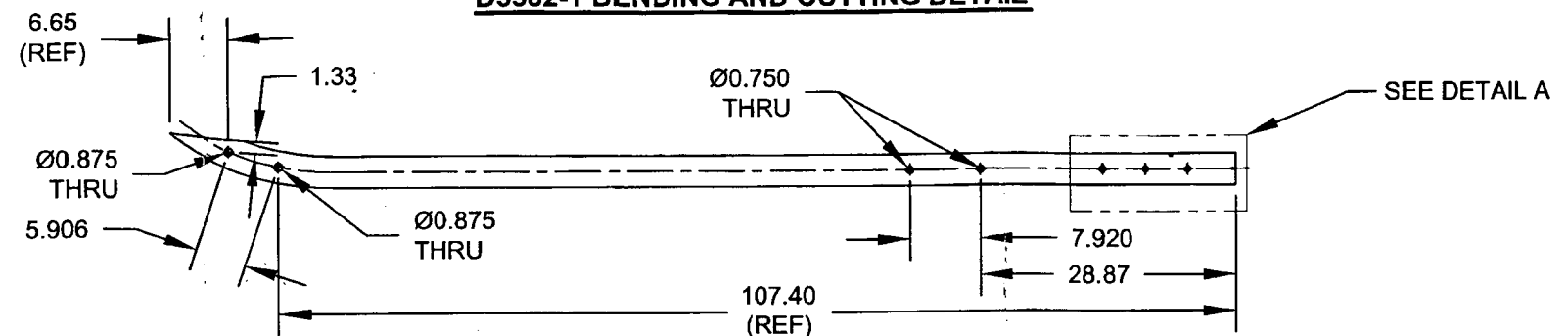
| Qty | Part Number   | Description       |
|-----|---------------|-------------------|
| X   | D3582-041     | SKIDTUBE ASSEMBLY |
| 1   | D2962-150     | EXTRUSION         |
| 1   | D2964         | CAP               |
| 1   | D2965         | CAP               |
| 1   | D2971         | CROSS BOLT SPACER |
| 2   | D2973         | CROSS BOLT SPACER |
| 2   | D3492-049     | PLUG ASSEMBLY     |
| 2   | D3492-051     | PLUG ASSEMBLY     |
| 6   | D3492-053     | PLUG ASSEMBLY     |
| 1   | D3508-3       | WEARPLATE         |
| 1   | D3508-9       | WEARPLATE         |
| 1   | D3508-11      | WEARPLATE         |
| 1   | D3508-13      | WEARPLATE         |
| 1   | D3558-3       | GASKET            |
| 1   | D3558-9       | GASKET            |
| 1   | D3558-11      | GASKET            |
| 1   | D3558-13      | GASKET            |
| 1   | D3584-1       | WEB               |
| 3   | D3662-1       | CROSS BOLT SPACER |
| 1   | D3662-3       | CROSS BOLT SPACER |
| 36  | AELS-1032-130 | INSERT            |
| 2   | ALS7-428-165  | INSERT            |
| 28  | AN3C4A        | BOLT              |
| 2   | AN3-5A        | BOLT              |
| 2   | AN4-4A        | BOLT              |
| 28  | AN960C10L     | WASHER            |
| 2   | AN960JD10L    | WASHER            |
| 2   | AN960JD416L   | WASHER            |

## GENERAL NOTES:

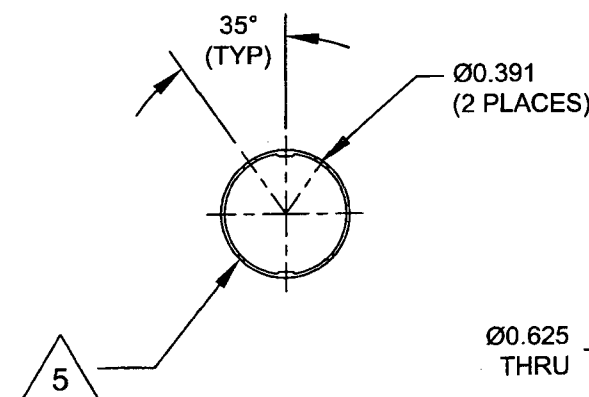
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL  $\varnothing 0.297$  HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
  - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
  - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
  - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



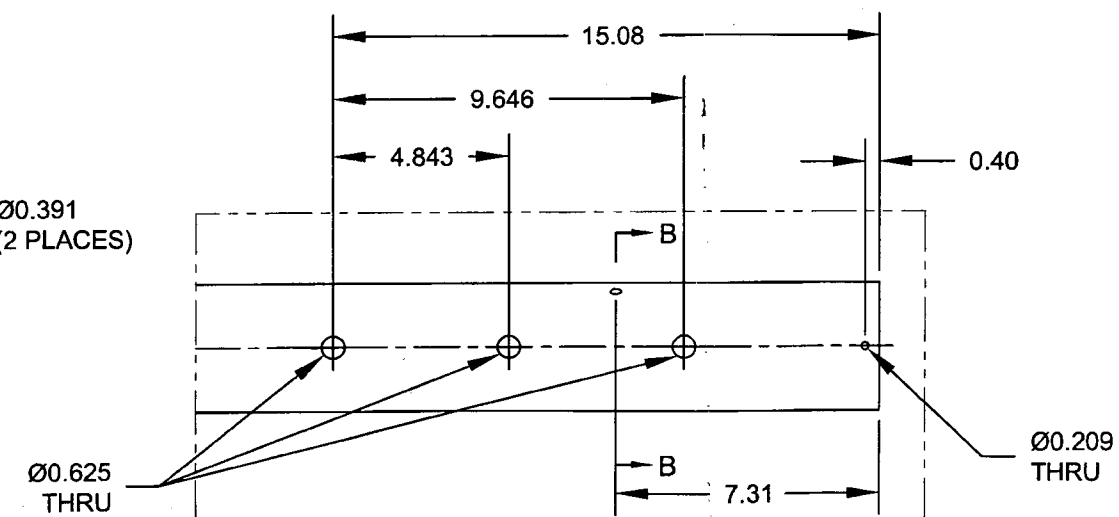
**D3582-1 BENDING AND CUTTING DETAIL**



**D3582-1 DRILLING DETAIL**



**SECTION B-B**  
SCALE 1:5



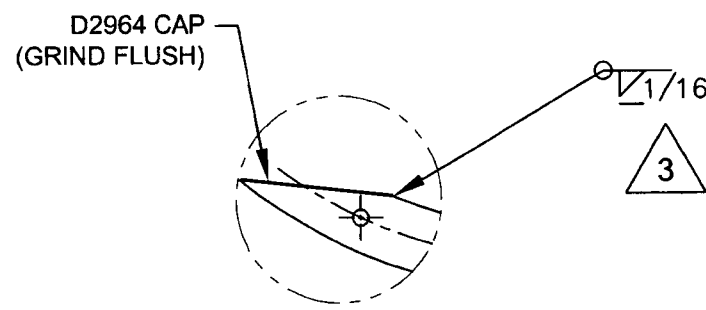
**DETAIL A**  
SCALE 1:5

**RELEASED**  
07.11.22

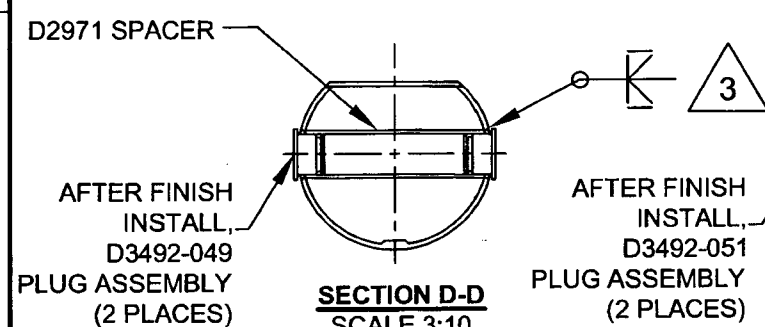
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|            |             |  |              |
|------------|-------------|--|--------------|
| A          | NEW ISSUE   | PH   | 07.06.08     |
| REV.       | DESCRIPTION | BY   | DATE         |
| DESIGN     | PH          | <b>DART AEROSPACE USA, INC</b><br>PORT HADLOCK, WA   |              |
| DRAWN      | PH          |  |              |
| CHECKED    | PH          | DRAWING NO.  | REV. A       |
| MFG. APPR. | PH          | D3582  | SHEET 1 OF 2 |
| APPROVED   | PH          | TITLE  | SCALE        |
| DE APPR.   | PH          | BK 117 SKIDTUBE ASSEMBLY   | 1:20         |
| DATE       | 07.06.08    | COPYRIGHT © 2007 BY DART AEROSPACE USA, INC<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |              |

8 7 6 5 4 3 2 1



DETAIL C  
SCALE 1:10

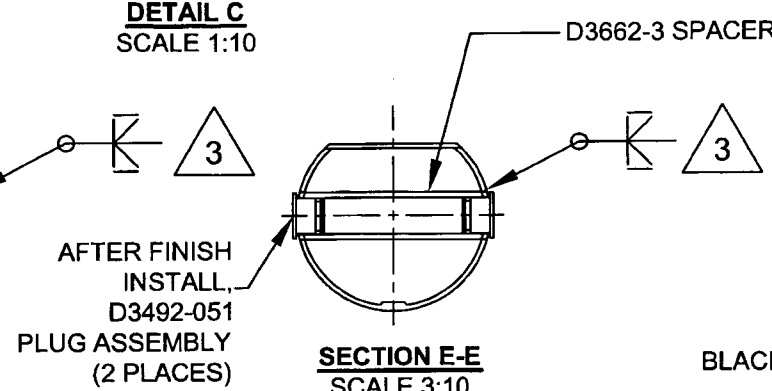


SECTION D-D  
SCALE 3:10

SECTION D-D NOTES

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2971 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-049 PLUG ASSEMBLY (2 PLACES)

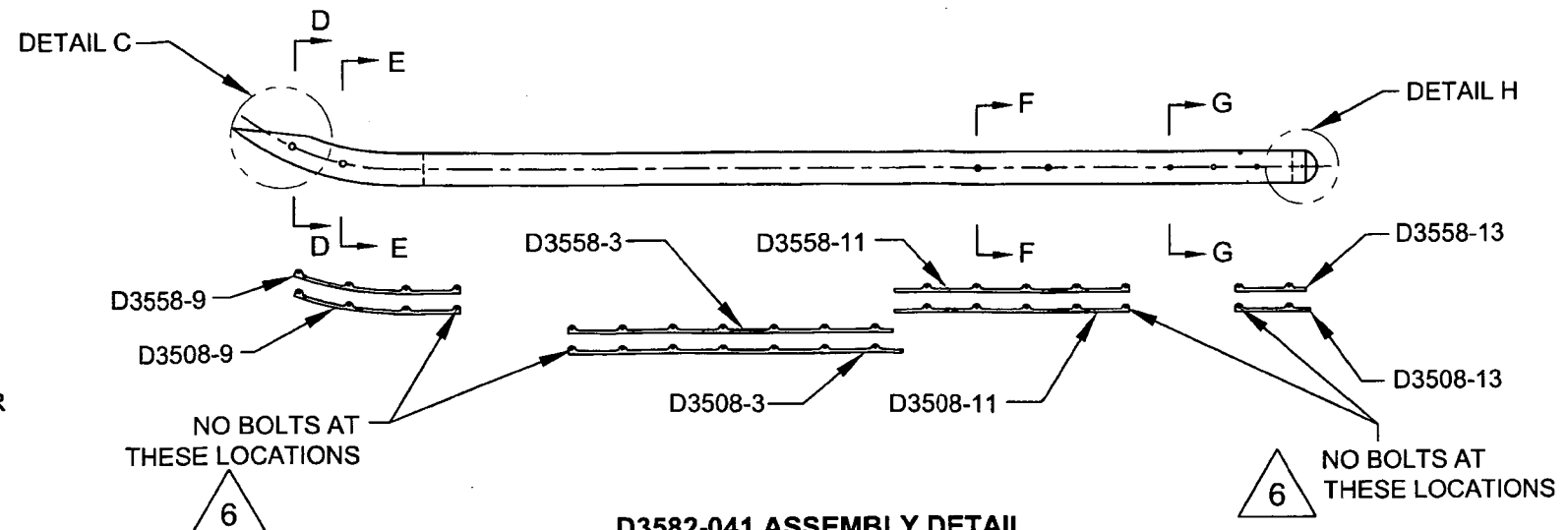


SECTION E-E  
SCALE 3:10

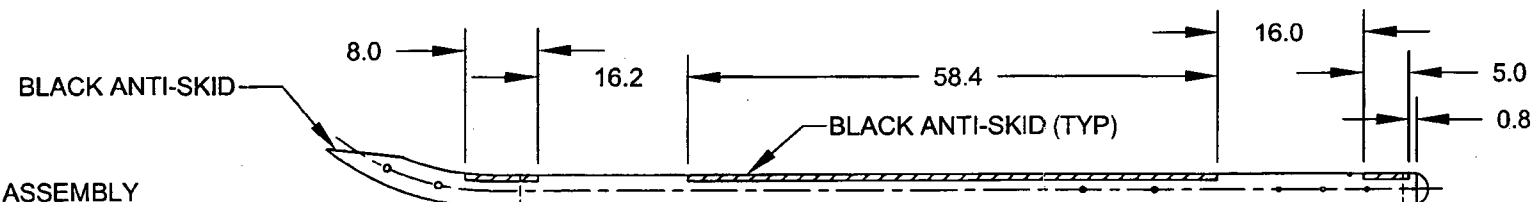
SECTION E-E NOTES

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

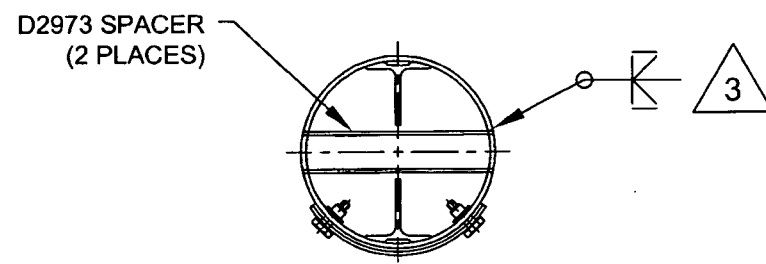
1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-3 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-051 PLUG ASSEMBLY (2 PLACES)



D3582-041 ASSEMBLY DETAIL



D3582-041 BLACK ANTI-SKID DETAIL

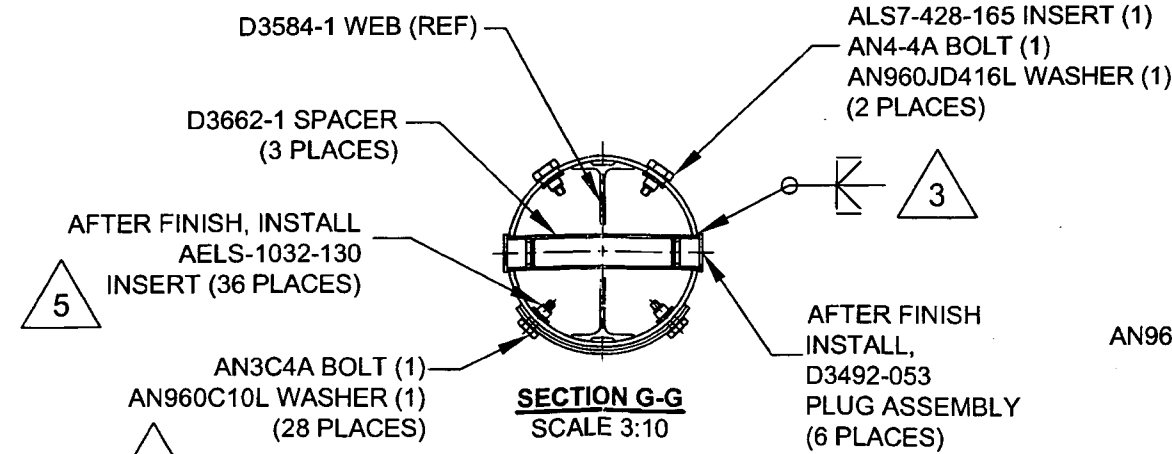


SECTION F-F  
SCALE 3:10

SECTION F-F NOTES

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2973 SPACER (2 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.625 DRILL TO REMOVE SPILL OVER

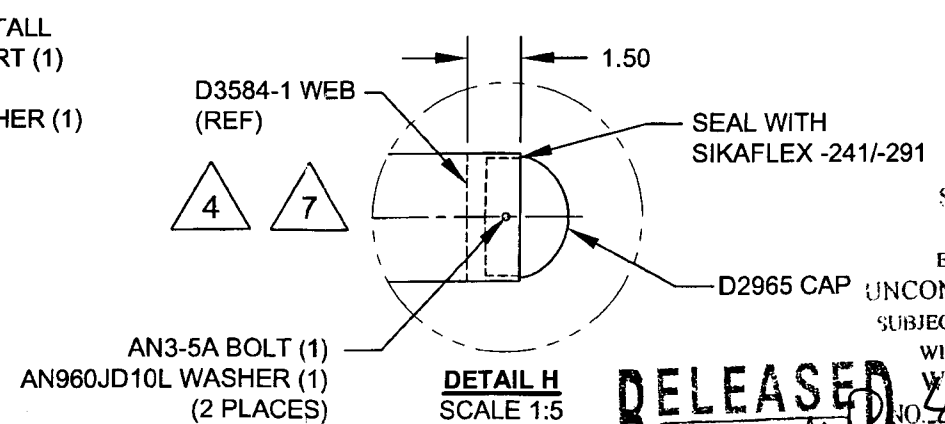


SECTION G-G  
SCALE 3:10

SECTION G-G NOTES

AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-1 SPACER (3 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-053 PLUG ASSEMBLY (6 PLACES)



DETAIL H  
SCALE 1:5

|  |          |   |              |
|--|----------|---|--------------|
| DESIGN   | PH       | <b>DART AEROSPACE USA, INC</b>              |              |
| DRAWN  | PH       | PORT HADLOCK, WA                            |              |
| CHECKED  | h        | DRAWING NO.                                 | REV. A       |
| MFG. APPR.   | h        | D3582                                       | SHEET 2 OF 2 |
| APPROVED   | h        | TITLE                                       | SCALE        |
| DE APPR.   | h        | BK 117 SKIDTUBE ASSEMBLY                    | 1:20         |
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RELEASED  
07.11.2008



NO. 169

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliot  
Job number: 40355A  
Part number: D117 762 041  
Description: Bk 117 skid  
Welding Process: Tig ☒ Mig ☐  
Base material: Aluminium  
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐  
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐  
Undercut: pass ☒ fail ☐  
Pin holes: pass ☒ fail ☐  
Overlap (cold lap): pass ☒ fail ☐  
Porosity (surface): pass ☒ fail ☐  
Coloration: pass ☒ fail ☐

Qualifier [Signature] Date of Test Coupon 08-08-21

Welder Barclay Elliot Date of Test Coupon 08-08-21

The above named individual is qualified in accordance with AWS D17.1.2001 to weld